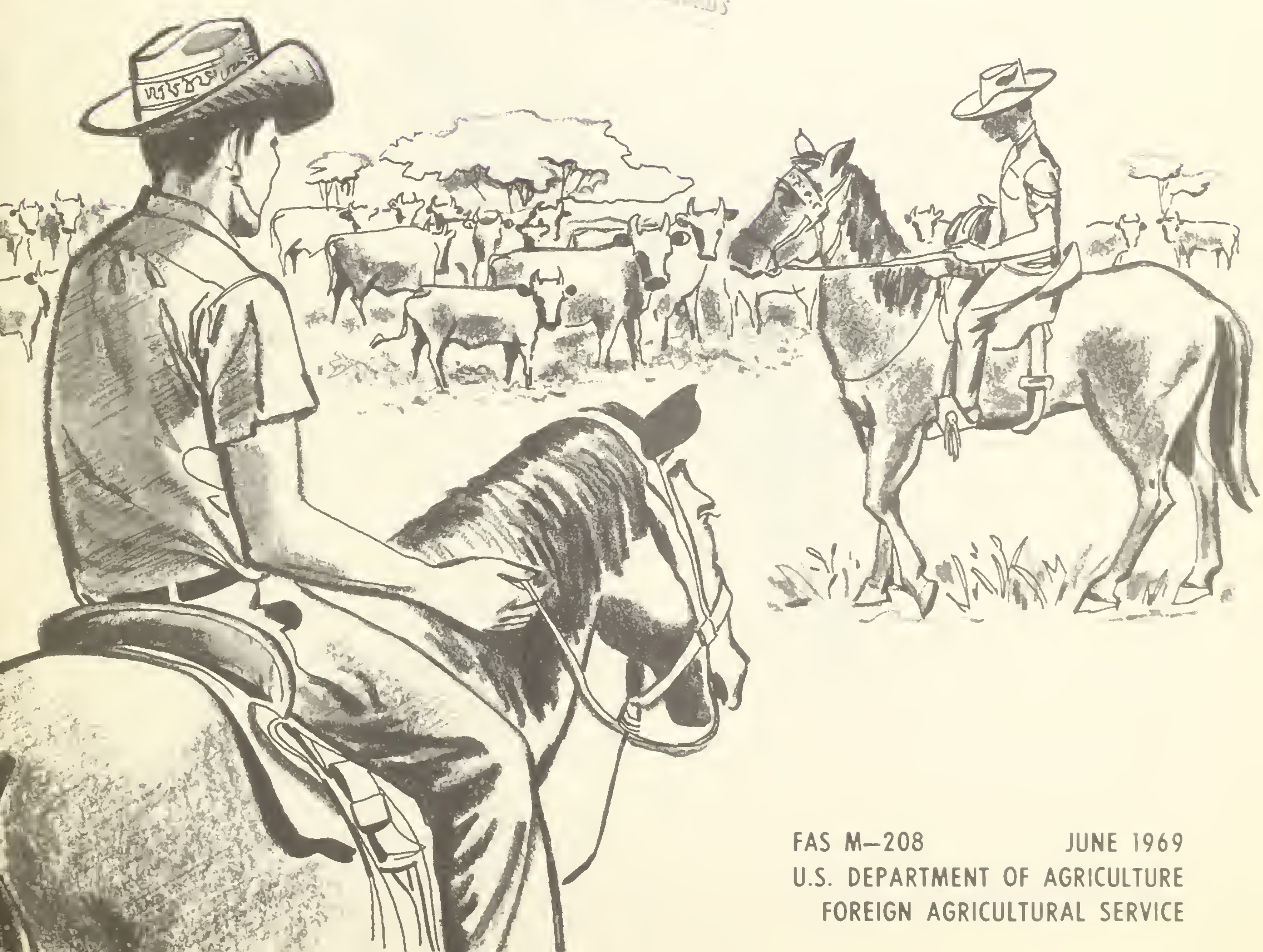
The BEEF CATTLE INDUSTRIES of CENTRAL AMERICA and PANAMA



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CENTRAL AMERICA

FOREWORD

During the last 10 years, the Central American countries and Panama have been expanding their exports of meat–primarily beef–to the United States. Most of these countries are eligible to export meat to the United States subject to the U.S. Meat Import Law (Public Law 88-482), which covers fresh, chilled, or frozen beef, veal, mutton, and goat meat. Their share of total U.S. meat imports subject to the Law has grown rapidly. In 1958 these countries supplied slightly less than 2 percent; by 1968 their share had risen to 12 percent.

Despite this rapid expansion of meat exports to the United States, livestock remains one of the least dynamic sectors of the Central American economy. In the past 10 years the increase in meat production has barely kept pace with the growth in population. Consequently, the growth in meat exports has been at the expense of domestic consumption of beef, which has declined 30 percent (on a per capita basis) during the same period.

This study is one of a series designed to help those in government and business keep abreast of developments in meat and livestock exporting countries. It supersedes *The Beef Export Trade of Central America,* FAS M–168, November 1965, which covered only Nicaragua, Costa Rica, Guatemala, and Honduras. The current study was prepared following the author's visit to the area in late 1968.

During his visit, the author was assisted by numerous individuals and organizations in Central America and wishes to acknowledge their help. They include officials of the major meat export plants visited and the livestock associations, the U.S. Agency for International Development, and U.S. Embassies. Especially helpful were the U.S. Agricultural Attachés, who throughout preparation of this study gave the author their fullest cooperation.

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The Beef Cattle Industries Of Central America and Panama

By J. Phillip Rourk[1]

INTRODUCTION

The Central American countries and Panama have enjoyed a rapid rate of economic growth during the last 10 years. Although in percentage terms industry has probably shown the greater increase, most of the growth in gross national product has derived from expanded production of agricultural commodities. Nonetheless, the economies of these countries still suffer from the weakness of overdependence on one or two export products. They are particularly vulnerable when one considers that in almost every instance their leading dollar exchange earners (coffee and cotton in Guatemala and Nicaragua, coffee and bananas in Costa Rica and Honduras, and bananas in Panama) are products in world surplus or subject to severe price fluctuations in world markets.

Aware of their vulnerable position, the governments and private sectors of these countries, assisted by technical missions from international organizations and the U.S. Agency for International Development (AID), among others, have, for the past few years, sought to bolster their economies by encouraging increased self-sufficiency in food production and the development of new export lines to provide the dollar exchange necessary to pay for essential imports. Much of their attention has been centered on the livestock industry, which has played a traditional, though relatively minor, role in the agriculture of Central America and Panama since the colonial period. Despite this increased interest, however, the livestock industry remains one of the least dynamic sectors of the economy and, in the past 10 years, the rate of increase in meat production has barely exceeded the rate of growth in population. Taking this into consideration, it is clear that the considerable growth in meat exports in recent years has been at the expense of domestic beef consumption, which declined by some 30 percent, on a per capita basis, from 1957 to 1968.

The failure of the livestock industries of Central America and Panama to respond more vigorously to the stimulus of the increased demand for meat and the concomitant higher prices is the result of the interaction of numerous factors. Among these, the most important are probably the present concentration of cattle on lands of low natural fertility in regions subject to a prolonged dry season, the primitive and extensive systems of management which prevail, and the failure of official entities and private credit institutions to provide adequate technical and financial assistance.

Though the situation varies from country to country and reliable and precise data are not available, the livestock industries of Central America and Panama are still characterized by a very slow rate of increase in the cattle population as a result of a low calving percentage and a high rate of mortality among both young and adult stock. Available evidence points to an effective average calving percentage (calves weaned) of well under 50 percent and an adult mortality rate of over 10 percent.

During the past few years, the Central American countries and Panama have imported substantial numbers of purebred breeding stock, predominantly Brahmans, from the United States. In certain of the countries an increasing percentage of the cattle population shows signs of improved breeding. Nonetheless, the majority of the cattle in the area remain essentially of "criollo" type. These animals are typically of small size, light weight, slow maturity, and low productivity. The steers generally require 4 to 5 years to reach average slaughter weight of about 320 kilograms (700 lb.).

At the present time cattle are reportedly held on over 400,000 farms and ranches throughout the Central American isthmus. However, 90 percent of these farms are of less than 125 acres. Because of the rudimentary nature of their exploitation and their small size, they cannot properly be considered commercial operations, nor do they

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offer much possibility for improvement in the near future. It is to the remaining 10 percent of the properties, those over 125 acres in size, that one must look for any sizable increase in beef production during the next few years. These properties currently account for some 75 percent of the land in pastures and about 55 percent of the total number of cattle.

As has been noted, the rate of increase in cattle numbers in Central America and Panama has, at best, merely kept pace with the growth in population. In fact, there are indications that the rate of slaughter in some of the countries is approaching a level that could result in an actual decline in cattle numbers in the near future. It is clear, then, that any increase in meat production in the future must be sought through an increase in per acre and per animal yields, rather than through a higher rate of slaughter. What is being sought by cattlemen and interested government agencies throughout the area is an increase in average live weight at slaughter from the present 340 kilograms (750 lbs.) at 4 to 5 years of age to an average 420 kilograms (925 lbs.) at 2½ to 3 years of age within the next 10 years. If these admittedly ambitious goals can be achieved concurrently with an increase in the effective calving percentage and a decrease in the mortality rate, it would mean an increase in cattle numbers to some 10 million (from the present 7.9 million) along with an increase of at least 50 percent in meat production, with no increase in the percentage of slaughter. Although better breeding (particularly the large-scale introduction of Brahman and other "tropical-type" cattle) and better management are important factors in future development, perhaps the greatest potential for increased production lies in pasture improvement.

Progress has been uneven, but it is apparent that a gradual improvement in the type and quality of beef cattle has taken place during the past few years. Under the stimulus of higher prices and a ready outlet for meat in the U.S. market, ranchers have purchased improved stock and have begun to apply more modern management techniques and to show interest in nutritional and disease-control programs. This has not yet generally been reflected in a heavier weight at slaughter both because the bulk of the slaughter cattle are still "criollo" and because cattlemen are tending to get cattle to the packing plant at a somewhat younger age in order to take advantage of current favorable prices. There has also been an increased slaughter of cows in recent years.

Prospects for development of the beef cattle industry and further expansion of meat exports vary from place to place and are discussed more fully under the individual country headings. However, there is little likelihood of a high rate of expansion of meat exports from Central America and Panama as a whole during the next 3 to 5 years.

As shown in the tables in each country section, expansion of meat exports during recent years has been a reflection not of increased production but of declines in domestic consumption. It is unlikely that domestic consumption, already at low levels, can be depressed further in the immediate future. It is also probable that any increase in the percentage of cattle that are slaughtered would occasion an actual decline in the cattle population. Any increase in exports, therefore, must come from increased production. Although progress has been made in recent years in all phases of the industry—breeding, feeding, and management—and the pace appears to be accelerating, the modernization of livestock production is an inherently slow process that requires many years of sustained effort.

Although the recent rate of increase in cattle numbers and yields has been slow, both governments and cattlemen have striven to maximize exports to take advantage of the high prices of the past 2 years. The upward trend in exports should continue unless prices fall sharply.

Meat exports from the Central American countries and Panama as a group, in the absence of any restraints, would probably increase from 5 to 10 percent in 1969. Beyond 1969 and for the next few years, exports would probably continue to go up at an average rate of about 5 percent per year. At the present time it appears that although the various governments are genuinely concerned about the low level of per capita meat consumption, they are also keenly aware of the need to increase exports to earn more foreign exchange. Measures have been taken to restrict beef exports to the United States in calendar year 1969 in line with the voluntary restraint program to which all countries in Central America shipping fresh or frozen beef to the United States have agreed.

BEEF AND VEAL:[1] U.S. imports from specified Central American countries, 1958-68

[Product weight]

Year	Guatemala	Honduras	Nicaragua	Costa Rica	Panama	Total
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
1958	---	409	40	2,761	---	3,210
1959	---	1,510	5,765	9,749	660	17,684
1960	---	3,391	10,033	15,329	---	28,753
1961	1,927	5,525	14,484	8,674	173	30,783
1962	12,268	9,349	15,737	8,106	245	45,705
1963	14,668	9,336	24,439	15,091	362	63,896
1964	11,656	8,545	23,303	17,638	55	61,197
1965	9,484	10,714	18,321	10,310	58	48,887
1966	12,843	12,788	24,175	12,329	2,246	64,381
1967[2]	18,616	12,731	28,294	24,838	3,043	87,522
1968[2]	21,561	14,016	36,908	33,891	4,276	110,650

[1] Fresh, chilled or frozen. [2] Preliminary.

U.S. Department of Commerce, Bureau of the Census.

BREEDING CATTLE: U.S. exports to specified Central American countries, 1958-68

Country and item	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Guatemala:	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Dairy	42	49	30	---	11	50	106	93	101	95	256
Beef	249	317	241	66	138	167	280	412	175	564	288
Total	291	366	271	66	149	217	386	505	276	659	544
El Salvador:											
Dairy	125	141	40	61	---	104	---	302	152	124	1
Beef	32	10	59	11	104	26	559	418	285	---	16
Total	157	151	99	72	104	130	559	720	437	124	17
Honduras:											
Dairy	19	4	4	36	---	105	134	256	40	251	27
Beef	135	44	48	65	112	547	140	421	---	45	33
Total	154	48	52	101	112	652	274	677	40	296	60
Nicaragua:											
Dairy	34	21	25	3	18	21	54	911	68	1	52
Beef	64	91	606	179	373	38	391	1,271	688	85	30
Total	98	112	631	182	391	59	445	2,182	756	86	82
Costa Rica:											
Dairy	9	52	113	89	234	46	124	369	42	99	189
Beef	42	82	211	33	69	180	175	292	148	109	283
Total	51	134	324	122	303	226	299	661	190	208	472
Panama:											
Dairy	---	---	5	13	14	24	42	143	---	100	6
Beef	61	50	111	131	102	173	109	111	199	57	223
Total	61	50	116	144	116	197	151	254	199	157	229
Totals:											
Dairy	229	267	217	202	277	350	460	2,074	403	670	531
Beef	583	594	1,276	485	898	1,131	1,654	2,925	1,495	860	873
Grand total	812	861	1,493	687	1,175	1,481	2,114	4,999	1,898	1,530	1,404

U.S. Department of Commerce, Bureau of the Census.

Industry Characteristics

Latest available data indicate that the cattle population of Guatemala in 1968 totaled about 1.4 million head, distributed mainly in the Pacific coastal departments of Escuintla and Suchitepequez and in the departments of Santa Rosa and Jutiapa along the frontiers with El Salvador and Honduras. Smaller numbers are scattered throughout the central highland area. Within the past few years some land has been cleared and cattle ranching operations initiated in the north coastal region around Lake Izabal.

The Pacific coastal area is unquestionably the major livestock area at the present time in terms not only of cattle numbers but also in degree of modernization of the industry. Although the region suffers from a dry season of 5 to 6 months duration each year, which is characteristic of the Pacific side of Central America, the period of severe stress and shortage of pastures is limited to about 3 months as a consequence of average annual rainfall of 100 inches or more that is reflected in a high water table. Some of the more progressive ranchers are now starting to prepare ensilage of corn or sorghum or hay from pangola and other grasses. A few ranchers have constructed irrigation facilities, using water from the numerous streams and rivers that flow from the central mountains into the Pacific Ocean. One large rancher is presently irrigating 70 percent of his 13,000 acres entirely by gravity flow.

The Pacific coastal plain is an area of generally good soils and offers excellent conditions for fattening cattle on grass. Although land values are high and increasing, there appears to be little likelihood of a displacement of cattle from this area in the near future. Cotton, a major competitor for land on the Pacific plain, seems to have stabilized in acreage, while production of bananas by the United Fruit Company has ceased.

This coastal area is also the major center for fattening feeder steers brought in from Honduras and El Salvador. Largely "criollo" in type, the steers are brought in as mature animals averaging only about 550-600 pounds in weight. They are fattened for a period varying from 3 months to a year and are slaughtered at weights averaging 700-750 pounds.

Although there are increasing numbers of improved breeds, primarily Brahman and Santa Gertrudis crosses, the majority of the cattle are still predominantly "criollo." Interest by the Ministry of Agriculture and private ranchers in artificial insemination is increasing, but its use is limited. However, breeders of purebred Brahman and Santa Gertrudis cattle report a rapidly growing demand from medium- and large-sized ranchers for breeding stock.

Reliable data on cattle numbers and the rate of increase of the cattle population are not available. Some well-informed sources believe the 1968 census figure of 1.4 million head to be too low. There is very general agreement, however, that the cattle population has increased little, if at all, during the last 5 years.

Processing and Marketing Facilities

As of late 1968 two packinghouses in Guatemala were certified to export meat to the United States. They were Exguapagra S.A. in the city of Guatemala and Ralda, Berger, and Company in Escuintla. The latter firm has a slaughterhouse under construction which will be completed in mid-1969. At that time it is expected that the present plant will slaughter for domestic consumption only, while export shipments will originate in the new facility. In addition, there are some 28 other slaughterhouses processing cattle for local consumption only.

Sanitation and inspection procedures at the two export plants have been approved as equivalent to those required of U.S. packinghouses. Those plants slaughtering for domestic consumption only fall far short of meeting the same standards of sanitation.

At the present time almost all beef is exported frozen and boneless, packed in cartons averaging 60 pounds. Export shipments move by refrigerated truck-trailer, over good roads, to the Caribbean port of Matias de Galvez. There, the trailers are loaded into converted landing ship tanks (LST's) for the 3-day voyage to the Florida ports of Miami and Tampa. An occasional shipment is made by sea to Puerto Rico, and a small quantity of boneless beef, less than 5 percent of the total, moves to Miami by air.

The possibility of exporting meat to the European market has been considered, but prospects do not appear favorable. The lack of refrigerated storage at the port, the absence of scheduled refrigerated-ship services, and the lower net prices after imported duties prevailing in the European market have all discouraged further efforts in this direction.

Prices

Packinghouses in late 1968 were paying 14 to 14½ U.S. cents per pound for cattle, live weight, with exceptional animals bringing 15 U.S. cents per pound. This price level is undoubtedly attractive to ranchers, who have responded by getting animals to the slaughterhouses as quickly as possible. As a result, cattle are being slaughtered at a somewhat younger age than formerly, and average live weights of cattle received are slightly below those of a few years ago.

Boneless beef was selling for from 47 to 50 U.S. cents per pound, c.i.f. Miami, in late 1968. Deducting the 3-cents-per-pound import duty and the nearly 3 cents per pound for ocean freight and documentation results in an f.o.b. Guatemalan port price of about 42 to 44 cents per pound.

Development Programs

During the past few years a number of livestock development programs have been proposed, but for one reason or another none have been put into effect. One such program—devised in 1965 by the National Council for Economic Planning—called for the financing of major improvements in breeding and management during the period 1965-69. Since the program was never activated, assistance to the livestock sector during this period has been limited to the normal services of the Ministry of Agriculture (investigations and a small artificial insemination program) and the credit facilities of commercial banks and the Instituto de Fomento de la Produccion (INFOP).

At the present time the Banco de Guatemala (official Central Bank) has under study a program to promote all phases of livestock development in the Pacific zone through financial and technical assistance to the medium- and large-sized ranches that are judged to be more adaptable to new methods and to have the managerial and financial capacity to undertake the program. The Bank hopes to get the program underway by early 1970. Total cost of the program would be approximately US $30 million, of which about half is being sought from the Inter-American Development Bank (IDB). It is recognized that significant results would not be attained in less than 5 to 7 years.

The need for such a program is evident, with virtually everyone agreeing that the major obstacle to more rapid development of the industry has been the lack of sufficient credit and technical assistance and the high interest rates from commercial banks.

Trade

Trade policy.—The Government of Guatemala exercises control over the beef export trade by means of export quotas assigned to each of the two export packinghouses. The quotas, however, are quite flexible and generally responsive to the number of cattle that can be purchased by the plants in question.

Guatemalan authorities have expressed some concern over rising domestic prices for meat, which have resulted in reduced local consumption. Nonetheless, they are also aware of the need to maintain a price structure that will provide incentive for accelerated livestock development as well as the country's need for increasing foreign exchange receipts from the export of beef.

Exports.—Exports of boneless beef from Guatemala have increased sharply. Practically all the beef is shipped frozen and boneless and moves to the United States. U.S. import statistics show receipts of 12.8 million, 18.6 million, and 21.6 million pounds (product weight) from Guatemala in 1966, 1967, and 1968, respectively.

Guatemala also exports token quantities of meat and live cattle, both purebred and commercial, to other countries, principally to El Salvador.

Imports.—Guatemala continues to import small amounts of meat and meat products such as meat extracts, sausages, hams, and baby foods. Locally produced items are gaining an increasing share of the market for these products.

Of considerable significance to the livestock industry in Guatemala has been the traditional importation of lightweight feeder cattle, primarily from Honduras and El Salvador. In 1967 the total number of cattle imported was 43,500 head, compared with 37,600 in 1966 and 33,300 in 1965. Imports during this period came about equally

from Honduras and El Salvador. Using an average yield of 260 pounds of boneless beef from each animal after fattening in Guatemala, the total yield in 1967 from the 43,500 head imported would have been about 11.3 million pounds. This is a substantial percentage of the total of 19.3 million pounds exported.

The Honduran Government is known to favor reducing exports of live cattle to the minimum and increasing slaughter and beef exports. Packinghouse capacity has been expanded recently in order to be able to take care of larger numbers of slaughter cattle. However, Guatemalan ranchers and packinghouse operators are confident that Honduran cattle will continue to come into their country in large numbers in response to the higher prices that prevail in Guatemala and because Honduras, in general, lacks the improved pastures necessary to fatten these cattle for market.

Imports of cattle from El Salvador may start to decline because meat shortages are starting to appear in that country.

Export prospects.–It is believed that at the slaughter rate of the past 2 years cattle numbers have been maintained but not increased. Therefore, the rate should not, and probably will not, be increased. Present price levels, however, also inhibit any increase in domestic consumption. Thus, it appears that if there is no significant price change, exports in 1969 will probably continue at the 1968 level. This assumes, of course, continued imports of feeder cattle from Honduras and El Salvador at a rate of about 40,000 head per year. Should these imports fall off, meat exports would show a corresponding decline.

Slaughterhouse capacity is not a factor since neither of the two export plants is currently operating at capacity.

Looking beyond 1969, there should be a slow growth in meat exports as productivity rises and as markets become available. Although the country undoubtedly has the long-range potential to produce two or three times as much meat as at present, this will be some time in the future and must await an intensification of production in the traditional areas and the opening up and development of extensive new areas in the Caribbean region and the Peten.

GUATEMALA: Beef production, net exports and consumption, carcass weight, 1958-68

Year	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	71,993	0	71,993	20
1959	73,150	-37	73,187	20
1960	75,139	-15	75,154	20
1961	74,214	3,385	70,829	18
1962	77,660	14,954	62,706	16
1963	76,284	18,407	57,877	14
1964	70,942	14,578	56,364	13
1965	71,995	17,634	54,361	12
1966	66,539	18,037	48,502	11
1967[1]	72,298	26,720	45,578	10
1968[2]	79,000	29,907	49,093	10

[1] Preliminary. [2] Forecast.

HONDURAS

Industry Characteristics

As is true of most of the Central American countries, statistics regarding total livestock population are of doubtful validity and, at times, contradictory. Best available information indicates that there are probably some 1.3 to 1.4 million head of cattle in Honduras at this time. If this figure is reasonably accurate, it would appear that there has been only a slight increase in numbers during the past 5 years.

Cattle are widely scattered throughout the country with the exception of the northeastern departments. The major concentration is in the southern departments of Choluteca and Francisco Moraza, with significant but somewhat smaller numbers in the central departments of Santa Barbara, Comayagua, and Olancho. Although the department of Cortes is the only north coast area with substantial numbers of cattle, it is perhaps the most dynamic in the country in terms of livestock development and has undoubtedly the highest quality cattle. In general, the soils in this department are superior to those in the rest of the country, and the area around San Pedro Sula, in particular, represents one of the major areas in Central America suitable for intensive livestock production.

The central departments have considerable potential for extensive livestock activities (cow-calf operation) while the Pacific area, which suffers from a very long dry season and generally poorer soils, is probably already carrying close to the maximum number of cattle possible.

Perhaps as much as 80 percent of the cattle in the country are owned by small farmers, few of whom own as much as 100 acres of land or 50 head of cattle. Most of the remaining ranchers own from 100 to 500 head each although the average size of cattle ranches has shown a tendency to increase in recent years along with increased interest in the livestock industry. The very small size and subsistence nature of a high percentage of the farms holding cattle makes progress difficult and slow.

Although there is as yet no evidence of a geographic shift in the livestock industry, the recent construction of a second export packing plant in San Pedro Sula and the presence in this area of many of the more progressive and largest ranches along with the generally favorable soil and climatic conditions all point to an acceleration of development there. The superior conditions of this region are reflected in the fact that average slaughter weight of animals received by the two slaughterhouses in San Pedro Sula is about 300 kilograms (660 lb.), while packinghouses in other sections of the country report 280 kilograms (620 lb.) or even as low as 260 kilograms (575 lb.).

From the above data on average weights, it is apparent that the vast majority of the slaughter cattle are of "criollo" type, and few have been finished on good pastures. Average age at slaughter is still between 4 and 5 years although there has been a noticeable tendency on the part of ranchers during the past 2 years to market somewhat younger cattle in order to take advantage of high prices.

An idea of the potential of the north coast area may be gained by noting that one large ranch in the San Pedro Sula area is currently marketing steers fed on grass which reach an average weight of 450 kilograms (990 lb.) at 2 to 2½ years. These animals are produced by crossing Santa Gertrudis bulls with high-grade Brahman cows. This ranch also maintains a purebred Brahman and a purebred Santa Gertrudis herd from which breeding animals are sold throughout the country.

Processing and Marketing Facilities

In late 1968 there were five packinghouses operating in Honduras that were certified to export meat to the United States. These were: (1) Empacadora ALUS, S.A., San Pedro Sula; (2) Empacadora Cortes S.A. de C.U. (CORSA), San Pedro Sula; (3) Empacadora del Norte S.A. Puerto Castilla, Colon; (4) Empacadora de Carnes de Choluteca, S. de R.L., Choluteca, and (5) Empacadora Catacamas Industrial, S.A., Catacamas. Of these, the Empacadora Cortes S.A. commenced operations in September 1968. As is the case with most such installations throughout Central America, the Honduran packinghouses have generally been operating at a level considerably below capacity. This, coupled with the small size and poor quality of the slaughter cattle, makes for a rather expensive operation.

Transportation systems are not highly developed in Honduras, and cattle arrive at slaughter points in a variety of ways. Some are brought to market by truck or rail, both of which are in need of expansion and modernization. Many are driven overland, which is extremely inefficient in that the cattle (none too fat at the beginning of the drive) lose considerable weight enroute.

Most Honduran meat destined for export is trucked to Puerto Cortes on the north coast and shipped to Florida on refrigerated vessels. Something less than 10 percent of the total moves to Puerto Rico, also by refrigerated ship. Some Nicaraguan meat moves through Honduras in refrigerated truck-trailers and is also exported from Puerto Cortes. Shipments from the Empacadora de Carnes de Choluteca generally leave from the Pacific coast port of Amapala, going either north to California or through the Panama Canal to the U.S. east coast.

As is the case throughout Central America, almost all beef is shipped frozen and boneless, packed in 60-pound cartons.

Prices

Prices paid for cattle in Honduras have been rising gradually in the past few years as a result of competition between the several packinghouses and in response to the higher prices received for beef in the U.S. market. The price range in late 1968 was from about 9 to 13 cents per pound, on the hoof, depending on the weight of the animal and the location of the plant. Most animals of an average weight of 600 to 700 pounds bring 11 or 12 US cents per pound. There is no difference in the price paid for animals slaughtered for domestic consumption or for export.

Prices for boneless beef are about the same as those received by the other Central American countries, that is, from 45 to 50 cents per pound, c.i.f. Florida, in November 1968. Transportation charges on meat from Honduras to U.S. ports are approximately 2.5 cents per pound for shipment by refrigerated ship.

Development Programs

During the period 1960-67, the National Development Bank extended credits totaling approximately US $15 million to the livestock sector. A high percentage of these credits, however, was destined for the purchase of feeder cattle, infrastructure on ranches (fences, buildings, etc.) or other uses which did not contribute directly to the development of the cattle industry. In addition, much of the remainder went to persons interested in dairy or dual-purpose cattle. Only a small amount went directly toward the improvement of the beef cattle sector. Most of this was used by north coast cattlemen for the importation of purebred animals, primarily Brahmans, from the United States.

The Government of Honduras has elaborated a comprehensive livestock development program to cover the period 1969-72. The program would be financed in large part by funds from the IDB, AID, and other organizations. Its objectives are the large-scale introduction of breeding stock, pasture improvement, an increase in the calving percentage, and a decrease in the high mortality rate. It is contemplated that about US$24 million in new credits would be made available under this program.

One of the major obstacles to rapid progress in the past, which will continue to occasion difficulties in the future, is the excessive fragmentation of the industry. As noted elsewhere in this report, about 80 percent of the cattle are currently held by very small farmers.

Trade

Trade policy.—The Government of Honduras exercises no control over prices of cattle or meat either for domestic consumption or for export.

Through the development programs described above, the government has attempted to stimulate a more rapid development of the livestock sector with the primary objective of increasing the amount of meat available for export and thus improve the country's balance of payments. To this end, the government enacted legislation in 1964 to prohibit the exportation of live cattle under 300 kilograms (660 lb.). If it had been possible to enforce this law, almost all such exports would have ceased since the live cattle moving to El Salvador and Guatemala are generally very lightweight feeder steers of "criollo" type. However, the law has proved difficult to enforce.

Exports.—Honduras has been exporting meat since 1958 in gradually increasing amounts. According to Honduran statistics, exports in 1966 amounted to 13.6 million pounds (product weight) of boneless beef. This increased slightly to 14 million pounds in 1967 and was estimated to have dropped to 13.8 million pounds in 1968. All but very small amounts went to the United States and Puerto Rico.

U.S. import statistics vary slightly from the above and show receipts of boneless beef from Honduras of 12.8 million pounds (product weight) in 1966 and 12.7 million in 1967. Shipments of beef from Honduras to the United States in 1968 were 14.0 million pounds.

A significant and traditional feature of the Honduran livestock industry is the export of live cattle, primarily to the neighboring countries of El Salvador and Guatemala. As noted earlier in this report, the Government of Honduras has attempted to control this traffic but with very limited success. However, it appears that the law of supply and demand may be more effective. As meat exports have increased and the competition for slaughter cattle

has become keener between the various packinghouses, prices paid to producers for live cattle have gradually improved. As a result, exports of live cattle have declined in recent years. According to official figures exports of live cattle dropped from a high of nearly 48,000 head in 1961 to a low of 28,000 head in 1966. However, 32,250 head were exported in 1967, and exports are estimated to have increased to 40,000 head in 1968.

It is probable that a certain number of cattle continue to cross the borders clandestinely. Regardless of the exact number, there does appear to be a downward trend in the export of live cattle from Honduras, and cattlemen and packinghouse operators are confident that such trade will continue to decline in 1969 and beyond. The reasons cited for this belief are: (1) Construction of the new slaughterhouse in San Pedro Sula, which went into operation in September 1968, thus increasing demand for slaughter cattle; (2) improved roads within the country, making trucking of cattle to the plants easier and more economical; and (3) slightly higher prices now being paid for cattle in Honduras.

Imports.–Honduras continues to import a substantial number of purebred breeding stock–mainly Brahman. Imports have ranged from a high of 761 head in 1963 to 310 head in 1967. If the 1969-72 Development Program mentioned earlier can be implemented successfully, the number of purebred cattle imported can be expected to increase substantially.

The country also continues to import small quantities of beef and pork items such as sausages, hams, and meat extracts.

Export Prospects.–Beef production in Honduras, estimated at about 40 million pounds in 1968, has shown almost no increase during the past 5 years. Since beef exports during the same period rose from about 9 million pounds (product weight) in 1964 to an estimated 13.8 million pounds in 1968 it is clear that this increase has been effected at the expense of domestic consumption. This is borne out by official Honduran statistics, which estimate a decline of about 20 percent in domestic consumption during the last 5 years.

There is little likelihood of a rapid change in this situation. Substantial interest in livestock development goes back only 5 years, and progress to date has been very slow. If the government is successful in obtaining the external financial assistance mentioned in the section on development programs, the pace of development may be expected to accelerate during the next 5 years. An additional factor is the greatly increased interest in livestock as a result of the more favorable prices being paid for cattle and the construction of new packinghouses.

It appears that at the rate of slaughter of the past 2 years cattle numbers have not increased. Some observers believe they may even have declined slightly. Therefore, any increased exports of meat in 1969 and beyond must come mainly from a decline in the export of live cattle to El Salvador and Guatemala. Both government officials and packinghouse operators are confident that better transportation facilities, expanded slaughterhouse capacity, and the higher prices now being paid for cattle will insure a rapid and continuing decline in the export of live cattle. If these

HONDURAS: Beef production, net exports and consumption, carcass weight, 1958-68

Year	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	27,158	589	26,569	15
1959	29,248	2,126	27,122	14
1960	31,417	4,842	26,575	14
1961	35,272	7,044	28,228	14
1962	37,323	13,536	23,787	12
1963	37,612	14,638	22,974	11
1964	36,654	11,920	24,734	11
1965	36,575	16,023	20,552	9
1966	37,506	18,518	18,988	8
1967[1]	39,690	18,950	20,740	8
1968[2]	40,000	18,903	21,097	8

[1] Preliminary. [2] Forecast.

predictions are correct, and they appear reasonable, it is anticipated that meat exports in 1969 will amount to 15 to 16 million pounds. Meat export gains in the period 1970-74 will depend on further curtailment of live cattle exports plus gains in productivity at a rate probably not exceeding 3 to 5 percent.

The above estimates are based on a continuation of meat export prices at or near present levels. If the price of boneless beef in the United States declines substantially, exports will probably fall off as a result of increased local consumption and a slackening of interest on the part of cattlemen.

NICARAGUA

Industry Characteristics

As is the case with most of the other Central American countries, reliable statistics concerning cattle numbers are difficult to obtain. Estimates by well-informed persons range from a low of about 1.3 million head, based on the 1963 census, to a high of 2 million head. Probably 1.6 million head is a reasonable compromise figure.

Nicaraguan cattle are still largely "criollo" in type and breeding. However, substantial imports of purebred bulls under programs dating back to 1955 are beginning to have an effect, and increasing numbers of animals now show evidence of improved breeding. By far the largest number of the imported bulls have been Brahman, with smaller numbers of Santa Gertrudis, Charolais, and the dairy breeds. Artificial insemination has been practiced for the past few years, and the number of cows bred in this manner is increasing.

Although the Caribbean coastal areas of Nicaragua offer the greatest potential for livestock, cattle traditionally have been raised in the areas of greatest population density—that is, the central and Pacific coast departments. The latter, in particular, offer generally favorable conditions, including flat or gently rolling terrain, rich volcanic soils, and ready access to markets. A disadvantage is the long dry season, lasting 5 to 6 months, when pastures dry up and water becomes scarce. A few of the larger and more favorably situated ranchers have irrigated at least some of their pastures in recent years, while others are expanding the use of silage or beginning to make hay. Nonetheless, a high percentage of the cattle in this area still suffer during the dry season, when much of the weight gains of the previous months are lost.

An additional limiting factor for the livestock industry in these departments is the competition for land from crops such as cotton, sugar, bananas, rice, sesame, and others which, when properly managed, yield a higher monetary return per acre. Despite its problems, however, the area will undoubtedly continue as one of the major livestock centers of the country although in the future there is likely to be a trend away from raising cattle to that of purchasing steers from other parts of the country for fattening.

Conditions in the central departments are less favorable than on the Pacific coast, and the area is more suited to an extensive type of cow-calf operation, or, in the better parts, intensive dairy farming. In time, as the livestock industry in Nicaragua becomes more specialized, these departments will likely provide the thin feeder cattle to be finished elsewhere.

There are very few large cattle ranches in Nicaragua, most of the cattle being held by ranchers and farmers owning from 100 to 500 head each.

Processing and Marketing Facilities

The marked improvement in transportation facilities that has occurred in recent years has had a favorable impact on the development of the livestock industry. Areas formerly remote from markets and where cattle had to be driven overland are now connected to the export packing plants or major centers of domestic consumption by good paved or all-weather roads. The recently completed road from Managua to Rama serves the double purpose of opening up a large new area for cattle raising and providing a Caribbean port from which meat is being shipped on converted LST's direct to Florida.

Nicaragua currently has three slaughterhouses certified to export meat to the United States. These are: (1) Empacadora Nicaraguense S.A., Condega, Esteli; (2) Ifagan y Cia. Ltda. (Matadero Modelo), Managua; and (3) Productos Carnic, Managua.

The plant at Condega operates for only 7 to 8 months, generally closing down during the period April 1 to August 1 when climatic conditions in the north central departments from which it draws its stock are such that the

animals are in poor condition and the owners are reluctant to bring them to market. During the past year, it has been slaughtering at a rate of 110 to 130 head per day during the months it is in operation. About 90 percent of its exports have been moving to Miami or Tampa, Florida, via the port of Matias de Galvez, Guatemala. The remaining 10 percent goes to Puerto Rico and is generally shipped via refrigerated vessels from the Nicaraguan port of Corinto.

IFAGAN (Matadero Modelo) is by far the largest of the three, with a current rate of slaughter of 200 to 250 head a day. It operates throughout the year. At the present time about 60 percent of the meat exported by this plant leaves from the port of Corinto. It moves to the port in refrigerated trucks to a 750-ton-capacity refrigerated warehouse, where it awaits the arrival of suitable vessels. The remaining 40 percent is transported from the plant in refrigerated truck-trailers to the river port of Rama on the Caribbean side, where the trailers are loaded onto barges or converted LST's for shipment to Florida. About 30,000 pounds a week are also shipped to Florida by air. Currently, about 50 percent of the meat from this plant goes to Florida, 35 percent to Puerto Rico, and 15 percent to California.

The third plant, Productos Carnic of Managua, slaughters an average of 125-150 head per day and operates throughout the year. This plant has been more active than the others in its efforts to obtain higher quality cattle through payment of slightly higher prices to cattlemen and other inducements. To the extent possible it has concentrated its buying in certain areas of the country where better animals are more readily available. As a result of these efforts, cattle slaughtered at this plant average about 400 kilograms (880 lb.), live weight.

About 30 percent of this plant's total output of boneless beef, consisting almost entirely of better cuts, is shipped to Florida by air as fresh, chilled meat and thus obtains a higher price than the frozen beef from the other plants. An additional premium is received for certain shipments of extra quality.

Most of the remaining 70 percent is shipped by refrigerated truck-trailer to the Guatemalan port of Matias de Galvez for shipment to Florida.

It is anticipated that increasing amounts of beef will be shipped to California, possibly as much as 50 percent of the total in 1969, taking advantage of weekly refrigerated banana boats from the port of Corinto.

As is the case with the packing plants in the other Central American countries, exports are in the form of boneless beef packed in cartons averaging 60 pounds.

In the first two plants listed, slaughter cattle average about 380 kilograms (840 lb.) live weight, and dressing percentage varies from 49 to 51 percent. Of the two, only the Matadero Modelo produces some subproducts such as bone meal and meat flour. Beef is not classified before shipment, so that meat from steers, cows, or bulls, as well as that from animals of different ages, is all shipped together. However, slaughter of cows does not exceed about 5 percent in any of the plants. The Matadero Modelo is also the only plant that buys on other than a live weight basis. In an effort to encourage production of better quality animals, the plant will, at the option of the seller, purchase on a hot-carcass basis, thus favoring producers of well-finished cattle. However, to date only a small percentage of total purchases has been handled in this manner.

Some very small shipments have been made to Europe, but the absence of scheduled refrigerated ships from Central America to Europe, the small volume of meat available at any one time, and the relatively lower price all make the European market difficult and unattractive.

Prices

Prices paid for slaughter cattle at the three plants are almost identical. In practice, the Matadero Modelo establishes the price levels, which are then adhered to by the other two. As of late 1968, the price ranged from 11½ US cents per pound for animals weighing 660 pounds to 13½ US cents per pound for animals weighing 1,000 pounds or more. Average price paid is about 12½ US cents per pound, live weight.

Prices received by the plants for boneless beef are averaging about 45 cents per pound, f.o.b. Nicaraguan port.

Development Programs

Nicaragua is the only country in Central America that can be said to have a national program for beef cattle development actually in operation. Nevertheless, the program suffers from certain deficiencies both of scope and execution. It does not contemplate the immediate development of the Caribbean region, which offers the greatest

potential for the future, while its execution has suffered from the lack of planning and coordination among the various agencies and institutions interested in livestock.

Programs implemented in recent years range from that of the National Development Institute (INFONAC), which was essentially a program to finance the importation and dissemination of purebred Brahman cattle, to the program of the National Bank of Nicaragua, a comprehensive effort to increase the calving percentage, reduce mortality rates, improve pastures, and encourage construction of fences, wells, silos, etc.

During the past 2 years, an Argentine firm of livestock consultants has provided technical advice to cattlemen under a contract with the National Bank of Nicaragua.

In all of the above-mentioned programs the government has disbursed about US$24 million during the last few years, in part based on loans from the IDB. A further loan of US$10 million from the IDB is now in the final stages of negotiation.

Trade

Trade policy.—The Nicaraguan Government exercises no control over prices paid for slaughter cattle for export or for domestic consumption. However, the government is anxious to prevent a drop in domestic consumption, and an informal agreement with the largest packing plant, the Matadero Modelo, provides that the plant must furnish the quantity of meat requested by the municipal slaughterhouse in Managua in order to insure an adequate supply. This meat is sold locally at prices which have increased only slightly during the past 4 years, with the exception of high-priced cuts such as tenderloin.

The government has also taken steps to curtail the export of live cattle and to prevent the excessive slaughter of cows.

Exports.—Nicaraguan exports of boneless beef (product weight) have increased very sharply in the last 2 years. The United States (including Puerto Rico) continued to be the major market, taking 28.3 million pounds in 1967 and 36.9 million in 1968.

Although Nicaragua was for many years a relatively large exporter of live cattle, such shipments have virtually ceased as a result of increased slaughter in the country and restrictive government regulations. By 1966 exports of live cattle had fallen to 2,480 head; in 1967 only 354 head were exported, mainly to the Netherlands Antilles.

Imports.—Nicaragua continues to import relatively unimportant quantities of sausages, canned pork, meat extracts, and other specialty items. The United States is generally the major supplier.

Imports of purebred breeding stock, which amounted to 2,522 head in 1965, dropped to 1,190 head in 1966 and only 379 head in 1967. Such imports continued at modest levels in 1968 but may be expected to increase again in 1969 if loans currently under negotiation are approved. However, with the increasing use of artificial insemination imports of breeding stock may not return to the record level of 1965.

Export prospects.—Production of beef has increased more since 1965 in Nicaragua than in any other Central American country. From about 74.6 million pounds in 1965, it rose to an estimated 102.7 million in 1968. Exports of beef during the same period increased by about 20.7 million pounds (product weight). Per capita beef consumption has declined since 1958, but increased slightly in 1968. Nevertheless, the situation in this regard is less serious than in some of the other Central American countries since per capita consumption in Nicaragua is still substantially above that in Guatemala or Honduras.

Most well informed observers are of the opinion that the sharp increase in meat production during the past 3 years represents the first return on the substantial capital investment made in the livestock industry during recent years in the form of improved breeding stock, pasture improvement, and more efficient management. Production gains probably reflect the sum of small advances in several areas, such as higher calving percentage, lower mortality rates, faster rate of growth (thus permitting slaughter at younger average age), and slightly higher dressing percentage.

It is also believed that at the rate of slaughter of the past 2 years, total cattle numbers have continued to increase, albeit slowly. If this is the case, the outlook is for production and exports to continue to trend upwards during the next few years, though probably at a more moderate rate.

There are some knowledgeable observers, however, who dissent from the above view. It is their contention that recent gains in production and exports are the result of an excessive slaughter of cows and that this will inevitably

result in a temporary halt in the upward trend of meat production and perhaps even a slight decrease as herds are rebuilt.

On balance, a 5-percent increase in production and exports in 1969 seems reasonable. After 1970, the rate of increase should accelerate as further gains in productivity are achieved.

The long-range livestock potential of Nicaragua is great. Preliminary studies indicate that the country could ultimately support a cattle population of at least 6 or 7 million head and that approximately 50 percent of all the land in Central America suitable for livestock is located in Nicaragua. However, much of this land is on the Caribbean side of the country, currently only very sparsely inhabited and covered largely by forests. Its full development is clearly well in the future.

NICARAGUA: Beef production, net exports and consumption, carcass weight, 1958-68

Year	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	42,000	-11	42,011	31
1959	46,000	7,733	38,267	28
1960	47,069	13,436	33,633	24
1961	59,456	18,672	40,784	28
1962	64,297	28,974	35,323	24
1963	77,221	38,211	39,010	25
1964	79,090	33,238	45,852	29
1965	74,550	28,535	46,015	28
1966	83,400	38,726	44,674	26
1967[1]	90,000	44,566	45,434	26
1968[2]	102,733	49,156	53,577	29

[1] Preliminary. [2] Estimated.

COSTA RICA

Industry Characteristics

The total cattle population of Costa Rica in 1968 is estimated at between 1.3 and 1.5 million head, with the latter figure perhaps the more realistic one. About three-quarters of the total may be considered beef animals; these are located primarily in the Pacific coastal provinces of Guanacaste and Puntarenas. The remainder are essentially dairy-type cattle concentrated in the central plateau provinces of San Jose and Alajuela. In recent years efforts have been made to expand the beef cattle industry in the northern provinces on the Caribbean side. Because of a longer rainy season, pastures are green throughout the year in this area. Although cattle numbers are increasing, the lack of roads, excessive rainfall—which increases the problem of parasites—and competition for land for crops such as bananas, are all limiting factors. At the present time, few cattle are raised here, the majority of the ranchers preferring to buy feeder steers from Guanacaste during the dry season when lack of pasture forces ranchers in that area to sell cheaply. These steers are then grass-fattened for a period of 6 to 9 months before slaughter.

In the past the majority of the cattle were held on small properties. However, modernization of the industry has been accompanied by an increasing concentration of cattle on the medium- and large-sized ranches, that is, those with 150-500 head or over 500 head, respectively.

While "criollo" type cattle are still to be found, Costa Rica has made more progress than any other Central American country in the improvement of livestock quality through grading up with purebred bulls. In the beef cattle sector almost all of the purebred breeding stock utilized has been Brahman; only a relatively small number of bulls of other breeds—like Santa Gertrudis, Charolais, or Brangus—have been imported. During the past year or two, a number of Indu-Brasil bulls have been imported from Mexico. Ranchers are attracted to these animals because they are substantially larger than the American Brahman.

Management practices are also more advanced than in the rest of Central America, and Costa Rica is probably the only country in this region where livestock numbers are increasing at a rate greater than that of population. Despite the progress achieved, however, much remains to be done, particularly in pasture improvement.

Processing and Marketing Facilities

As of November 1968 there were four packing plants in Costa Rica certified to export meat to the United States. These were: (1) Planta Empacadora de Carnes de Costa Rica, S.A., Barranca; (2) Empacadora Guanacasteca, Liberia; (3) Beef Products Co., Ltd., San Jose; and (4) Henderson y Cia Ltda., Alajuela. There are, in addition, a number of small plants slaughtering for domestic consumption.

Because the capacity of the export plants far exceeds the number of cattle available for export, none is presently operating on a full-time basis. The plants generally shut down for a period of 3 to 4 months—usually from May or June through August.

The marketing system for cattle in Costa Rica differs significantly from that of any other country in Central America and is under the control of the National Production Council (Consejo Nacional de Produccion), an official entity that determines the number of cattle that can be exported or slaughtered for domestic consumption. Each year, the Council polls the various livestock associations to determine the number of cattle the ranchers wish to market during the Costa Rican cattle year, which runs from August to July. The Council then reserves a certain percentage of the total available cattle for domestic consumption. Permission is then granted to export the remainder, either live or as meat. The price to be paid by the packers for export animals is determined by means of bids from the packing plants, and the export quota is divided among the ranchers and packing plants on a proportionate basis. The packers pay the value of the export cattle they slaughter directly to the Council which, in turn, reimburses the cattlemen through their respective associations. The export quota for 1968 was fixed at about 70,000 head.

A measure of the superior quality of Costa Rican cattle, as compared with those in the other Central American countries, is the fact that slaughter animals average slightly over 1,000 pounds, live weight, at between 3 and 4 years of age. Yields are also relatively high, with an average dressing percentage of 56 percent, compared with 48 to 50 percent for the remaining countries of Central America. The export plants will not receive steers weighing less than 400 kilograms (880 lb.), and they do not slaughter cows.

Most of the meat now being shipped from Costa Rica is exported by refrigerated ship from the Caribbean port of Limon or the Pacific port of Puntarenas. Some, currently about 10 percent, is moved by truck-trailer to the Guatemalan port of Matias de Galvez for shipment via barge to Florida. Virtually none is exported by air.

At the present time about 75 to 80 percent of the beef exported is shipped to Florida, the remainder going to New York, Puerto Rico, and California. The lack of scheduled refrigerated ships, the small volume of meat available, and lower prices all render the European market impractical at this time.

Prices

During the current year meat packers have been paying 15½ to 16 U.S. cents per pound, live weight, for export steers. Cattle intended for domestic consumption, mostly cows, have been bringing about 1½ to 2 U.S. cents less.

Beef is exported in the form of frozen and boneless, packed in cartons averaging 60 pounds. Current price for this meat is 43 to 43½ U.S. cents per pound, f.o.b. slaughterhouse.

Development Programs

Although a comprehensive beef cattle development program was drafted in 1966 by the national planning office, it has not yet been put into effect. However, credit has been available, primarily for the importation of breeding stock and the purchase of feeder cattle for fattening.

Costa Rica also has a well-developed extension service; its facilities for research, animal sanitation, and cattle registration are the most advanced in Central America.

The government recognizes the need for further assistance to this sector of the economy, particularly in the sense of promoting pasture improvement and more intensive methods of production, and hopes to obtain external financing to meet part of the anticipated costs.

Trade

Trade Policy.–As already noted, the Government of Costa Rica regulates exports by means of a quota established annually by the National Production Council. The Council also establishes the minimum prices that may be paid to producers for cattle for export or domestic consumption. It also establishes a maximum price for certain cuts of meat sold locally.

Although the objective of this policy has been to maintain domestic consumption, it has not been entirely successful. Per capita consumption declined from 32 pounds in 1958 to 13 pounds in 1968. With high export prices, the pressure to sell abroad is great, and the internal market has had to absorb large numbers of cows and calves, which yield far less meat per head slaughtered than the export steers.

Exports.–Costa Rican beef exports have increased very sharply in the past few years. The United States, by far the largest market, took 12.3 million pounds (product weight) of boneless beef in 1966, 24.8 million in 1967, and 33.9 million in 1968.

Costa Rica formerly exported substantial numbers of live cattle, principally to Peru and the Netherlands Antilles. However, such exports have virtually ceased during the last couple of years and are not likely to resume on a large scale in the near future.

Imports.–Costa Rica imports very small amounts of meat and meat products, primarily pork products, sausages, and meat extracts.

Costa Rica also imports some purebred cattle for breeding purposes. These formerly came almost entirely from the United States, but more recently relatively large numbers of purebred stock have been imported from Mexico.

Export prospects.–Beef production in Costa Rica increased at a rapid rate during recent years from about 52 million pounds in 1966 to an estimated 68 million in 1968. At the same time, however, exports increased from 15.7 million pounds (product weight) to an estimated 34.0 million. It is clear, therefore, that part of the recent increase in exports is a reflection of declining domestic consumption. Some cattlemen also believe that too many cows have been slaughtered in recent years and that this will slow down the rate of production increase in the next few years.

On balance, it is believed that exports in 1969 will remain at about the 1968 level, that is, about 34 million pounds (product weight). Beyond 1969, there should be a continuation of the recent upward trend in exports, though at a much slower rate.

As is the case in all of the countries in Central America, significant year-to-year fluctuations are likely, depending on the price relationship between the domestic and export markets and the needs of the various governments for dollar exchange earnings.

COSTA RICA: Beef production, net exports and consumption, carcass weight, 1958-68

Year	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	41,000	4,069	36,931	32
1959	50,000	14,268	35,732	30
1960	54,000	22,236	31,764	25
1961	48,000	14,926	33,074	25
1962	48,000	11,663	36,337	27
1963	50,000	21,848	28,152	20
1964	59,000	26,955	32,045	22
1965	54,000	14,355	39,645	27
1966	51,600	21,994	29,606	19
1967[1]	60,800	34,887	25,913	16
1968[2]	68,000	46,400	21,420	13

[1] Preliminary. [2] Estimated.

EL SALVADOR

Industry Characteristics

Latest available data indicate that cattle numbers totaled about 924,000 head in 1967 compared to 825,000 in 1960. El Salvador is the only Central American country that does not export beef to the United States. However, this country is a net exporter of cattle, mainly to Guatemala where they are fattened and exported to the United States. Thus, production in El Salvador indirectly affects the volume of beef exports from Central America to the United States.

El Salvador is the smallest country in Central America, with a population growing at an annual rate of about 4.0 percent. Although the farm area is restricted, El Salvador continues to depend heavily upon agriculture, which provides about 26 percent of its gross national product and employs about 60 percent of the active labor force. Studies by the U.S. Department of Agriculture's Economic Research Service indicate that net food production increased 34 percent in the past decade (1957-59 to 1967), but on a per capita basis production has increased only 1 percent. However, livestock production has not increased as rapidly as crop production. While crop production increased 48 percent over the last decade, livestock production increased only 9 percent. But on a per capita basis, crop production increased 12 percent and livestock production declined 18 percent.

One of the major problems confronting the livestock industry in El Salvador is the small size of producing units. There are very few commercial beef cattle farms in El Salvador, as indicated by the relatively low proportion of steers in total commercial slaughter. In 1967, for example, steers comprised only 15 percent of total commercial slaughter, while cows and oxen were 48 and 17 percent, respectively. According to the 1961 census, there were 88,372 farms with cattle in 1961, but only 80 had more than 500 head and some of these were probably dairy operations.

Processing and Marketing Facilities

Since El Salvador does not export meat to the United States, it does not have any certified packinghouses. Also, since the country's livestock exports are mainly live cattle, its slaughterhouses and packinghouses are designed to fulfill domestic requirements. There has been some interest in developing an export market for beef in the United States. However, the legislation necessary to establish a meat inspection service is still pending in the Salvadoran Congress, so it may be some time before a suitable processing plant is constructed. A small private processing plant for slaughtering cattle, hogs, and poultry was completed at Ateos.

Prices

During recend years, meat prices have been remarkably stable. In the San Salvador market consumers paid 63 cents per pound for "first" class beef in 1965. By 1966 the price had risen only slightly to 64 cents, but it dropped to 61 cents in 1967. However, beef prices began rising rapidly in the first half of 1968. The Minister of Agriculture attributed this rise to three factors: (1) Better prices offered by Guatemalan and Honduran processors exporting to the United States, (2) contraband exports, and (3) increased cow slaughter in 1967. To discourage further price increases, the government temporarily suspended live cattle exports in June 1968.

Development Programs

There has not been much external financial assistance for Salvadoran agriculture since 1963, when AID loaned $8.9 million to El Salvador for supervised credit, livestock development, and irrigation and drainage projects. These funds have virtually all been loaned out, but additional funds are available for these and other agricultural enterprises from the Central Bank's Economic Development Fund.

As in most Central American countries, the agricultural economy of El Salvador is dependent on only a few commodities. Three crops–coffee, cotton, and sugarcane–provided 80 percent of the estimated value of total agricultural production in 1965. Thus, the major goal of recent development programs has been the diversification of agriculture and expansion of the livestock sector. Through November 1968, the Central Bank had approved loans totaling US$4.8 million, of which US$1.8 million was for agriculture (mainly for livestock development).

Trade

Trade Policy.–El Salvador is a member of the Central American Common Market (CACM), and trade with member countries is generally free of restrictions and duties. Agricultural products traded with non-CACM countries are licensed for exchange control. Restrictive licensing may be applied to exports of some commodities, including livestock, during periods of scarcity to insure adequate domestic supplies. Import duties for most food products have been increased under the CACM agreement. Breeding cattle, which are the United States major livestock export to El Salvador, are admitted duty free.

Exports and imports.–Live cattle constitute El Salvador's major livestock export, and Guatemala is the major market. El Salvador and Honduras are major suppliers of feeder cattle to Guatemala, where these animals are finished, slaughtered, and exported to the United States. In 1967 El Salvador exported 20,765 head of cattle, only slightly more than in 1966 and substantially below the record high of 28,693 head in 1963.

El Salvador's meat imports have been very small in recent years and consist primarily of border trade. However, in order to upgrade domestic livestock, the country does import purebred cattle. In 1967 El Salvador imported 683 head of purebred cattle, of which 472 head came from the United States. Commercial grade cattle are also imported, mainly from other Central American countries; imports totaled 1,704 head in 1967.

Export prospects.–El Salvador's small land area and high population density are not conducive to extensive livestock production; thus, future production and exports are dependent on more intensive output through improved breeding practices, irrigation, and other pasture-improvement practices. In the short run El Salvador should continue to find an attractive market for its live cattle in Guatemala. In the longer run, however, greater attention will have to be focused on increasing domestic beef and veal consumption, which has been declining steadily. Nevertheless, El Salvador is interested in developing its own inspection service and slaughter plants in order to export meat to the United States. If such a program was implemented, it would necessitate a reduction in El Salvador's exports of live cattle to Guatemala and consequently reduce Guatemala's meat exports to the United States. This development would not expand Central America's total beef exports to the United States but would result in a slight change in the origin of these exports.

EL SALVADOR: Beef porduction, net exports and consumption, carcass weight, 1958-68

Year	Production	Net exports	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	33,466	---	33,466	15
1959	32,273	---	32,273	14
1960	35,995	---	35,995	15
1961	38,858	-86	38,944	15
1962	38,488	-95	38,583	15
1963	39,703	-137	39,840	15
1964	38,475	-42	38,517	14
1965	38,084	-51	38,135	13
1966	40,210	-53	40,263	13
1967[1]	38,847	-20	38,867	12
1968[2]	46,045	-110	46,155	14

[1] Preliminary. [2] Estimated.

PANAMA

Industry Characteristics

Best available information indicates a total cattle population of slightly over 1 million head in 1967. This reflects a growth rate of between 3 and 4 percent during the last decade, second only to Costa Rica among the Central American countries. As is characteristic of all the countries covered in this report, the majority of the cattle

are concentrated in the Pacific coastal area of the country. The provinces of Chiriqui, Los Santos, Veraguas, and Herrera, all located on the Pacific coast west of the Panama Canal, account for over 80 percent of the total. With the exception of Chiriqui, where more favorable conditions exist, these provinces are characterized by a prolonged dry season, a shortage of surface water, and generally poor soils lacking in phosphorus and trace elements. They are more suitable, therefore, for a rather extensive form of exploitation. In the future, as the industry becomes more specialized, it is likely that these provinces will concentrate on the production of feeder cattle to be finished in the provinces of Chiriqui, Panama, and others where conditions are less adverse.

The Panamanian livestock industry is also characterized by the small average size of the ranches engaged in cattle raising. According to official data, small farms—defined as those under 100 hectares (247 acres) in extent—hold 80 percent of the total number of cattle. Only 8 percent are held on large ranches exceeding 1,000 hectares (2,471 acres) in area.

Although "criollo" type cattle are still to be found in substantial numbers, the majority of the beef cattle in Panama today show evidence of Brahman blood. Substantial numbers of purebred Brahman bulls have been imported from the United States in the last few years. More recently, cattlemen have imported a number of Indu-Brasil animals from Mexico, which have aroused interest because of their larger size. Cattlemen are encouraged to import purebred animals by the National Bank of Panama, which loans the money for their purchase, and the Panamanian Cattle Institute, which contributes US$150.00 per head toward the payment of freight and shipping charges.

Processing and Marketing Facilities

Panama has good hard surface roads from the major cattle producing provinces to the packinghouses, and most cattle are moved by truck. However, because of careless handling and the fact that it is not customary to dehorn cattle in Panama, a certain amount of meat loss is incurred through bruising and trampling of the cattle enroute.

As of late 1968, there were two slaughterhouses in Panama certified to export meat to the United States. These were the Abbatoir Nacional, S.A., Apartado 714, Panama; and the Cooperation Ganadera Chiricana, Apartado 405, David. The Abbatoir Nacional has a capacity of about 300 head per day; the other plant, though newer, is much smaller, with a daily capacity of approximately 100 head. Both plants customarily operate throughout the year and slaughter cattle for domestic consumption as well as for export.

An indication of the relatively high quality of Panamanian cattle is the fact that slaughter animals average about 400 kilograms (880 lb.), live weight, and have a dressing percentage of 55 percent. Only male animals (steers and bulls) are slaughtered for export.

Most meat exports from Panama are made in refrigerated trailers from the port of Balboa. As is customary throughout Central America, beef is shipped as frozen and boneless, packed in cartons of about 60 pounds. Approximately 70 percent of total exports go to Puerto Rico, with the remainder generally going to Florida. Some of the latter is shipped through the Guatemalan port of Matias de Galvez.

The Canal Zone is also a significant and growing market for Panamanian beef. In 1968 Zone purchases, both of whole carcasses and of boneless beef, amounted to about 1.5 million pounds, product weight. Purchases have been increasing at about 10 percent per year, a rate which is expected to continue as wage scales in the Zone are gradually brought up to the U.S. minimum wage level.

Marketing is controlled to a certain extent by the Cattle Institute, a semiofficial entity, and the Cattlemen's Cooperative. The Institute determines the number of cattle available for market and then sets the number which may be exported either live or as meat. Prices to be paid for export animals are determined on the basis of bids from the packing plants, and the export quota is divided among ranchers and plants on a proportionate basis. In 1968 the export quota was set at between 12,000 and 13,000 head.

Total slaughter in 1967 was about 148,000 head, and per capita domestic consumption was estimated at about 47 pounds. This relatively high level of domestic consumption as compared with the other Central American countries is a reflection of Panama's higher standard of living and per capita income.

Prices

As of late 1968 slaughterhouses were paying 17½ U.S. cents per pound, live weight, for cattle weighing at least 900 pounds. Prices are reduced by ½ cent per pound for each 25-pound drop in weight from 900 pounds. The price

for meat exported to the United States at the same time was about 43 to 44 cents per pound, f.o.b. slaughterhouse. Prices paid by the Canal Zone market for Panamanian boneless beef were somewhat higher but were for individually selected quality animals.

The Office of Price Control is charged with regulation of prices on the domestic market. However, control has not been effective, and prices paid for cattle and meat sold locally are about the same as those for export.

Development Programs

Although no national livestock development program is in operation at this time, a number of official government agencies, such as the Institute for Economic Development (IFE) and the National Bank of Panama, have made available credit and technical assistance to ranchers.

Certain private commercial banks, including two U.S. banks, have extended substantial credit for pasture improvement, certain types of infrastructure on ranch properties, and the purchase of breeding stock.

Trade

Trade Policy.–As already noted, the Cattle Institute and the Office of Price Control are responsible for establishing export quotas and domestic price levels, respectively, for meat and livestock.

Price controls, in particular, have not been effective, perhaps because they have been all inclusive, affecting all qualities and cuts of beef.

Exports.–Panama has become a significant exporter of meat only since 1966. U.S. imports of boneless beef from Panama were approximately 2.2 million pounds in 1966, but rose to 4.3 million in 1968.

In previous years some live cattle were exported, but such shipments have been declining and in 1966 amounted to only 4,958 head.

Imports.–During recent years Panama has imported between 300 and 400 head of purebred cattle annually. Until a year or two ago, these came almost entirely from the United States, but a substantial number is now being imported from Mexico.

Export Prospects.–Beef production has been increasing in Panama at a rate of between 3 and 4 percent per year during the past 5 years. Official data record a total of 122,000 head slaughtered in 1963 and 148,000 in 1967. At the same time, total cattle numbers have increased from about 842,000 in 1963 to 1.04 million in 1967. It is clear, therefore, that Panama has the potential to continue to increase meat exports.

However, domestic consumption of beef and veal, at about 47 pounds per capita, is substantially higher than in the rest of Central America. At the same time, per capita income is also higher in Panama and seems to be increasing more rapidly. For this reason it may be anticipated that much of the future increase in production will be channeled into domestic consumption.

It is probable that exports to the United States in 1969 will amount to about 5 million pounds or slightly more. For the next few years exports may grow at an average rate of 5 percent per year, given favorable prices.

PANAMA: Beef production, net exports and consumption, carcass weight, 1958-68

Year	Production[1]	Net exports[2]	Available for consumption	Per capita consumption
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*Pounds*
1958	41,400	-95	41,495	41
1959	42,300	-134	42,434	40
1960	41,850	-128	41,978	39
1961	47,700	48	47,652	44
1962	53,100	137	52,963	47
1963	54,900	243	54,657	47
1964	55,800	-80	55,880	46
1965	60,300	-66	60,366	48
1966	64,800	3,160	61,640	48
1967[3]	66,600	3,929	62,671	47
1968[4]	68,400	5,700	62,700	47

[1] Based on average carcass weight of 450 pounds. [2] Partially based on United States trade data. [3] Preliminary.
[4] Estimated.

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